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ABSTRACT

This study is based on the assumption that texts are composed of two kinds of propositions: lexical and relational. Lexical propositions account for semantic relations within a clause, and they can be described as semantic role relations between a lexical predicate and its arguments. Relational propositions account for functional relations among clauses, sentences, and passages of any size. The terms "rhetorical" and "relational proposition" are used synonymously. Lexical propositions are in the text and are lexically and grammatically signalled, whereas relational or rhetorical propositions are not unambiguously signalled. The question of how rhetorical relations are understood by readers of texts is addressed, and two empirical studies are reported briefly that seem to support the following hypotheses: (1) at least in some text comprehension tasks, relationship propositions seem to be identified with some degree of consensus; and (2) comprehension of relational propositions may figure more consciously and explicitly in some demanding text comprehension tasks such as translation. It is concluded that more research is needed to determine whether it is realistic to assume that a battery of rhetorical relations can be delineated so accurately that readers can be taught to identify them with a great degree of consensus. (LB)

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RELATIONAL PROPOSITIONS IN TEXT COMPREHENSION PROCESSES

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Introduction

This study is based on the assumption that texts are composed of two kinds of propositions: lexical propositions and relational propositions. Lexical propositions account for semantic relations within a clause, and they can be described, for instance, as semantic role relations between a lexical predicate and its arguments, as in case grammar. Relational propositions account for functional relations among clauses, sentences, and passages of any size. The batteries of types of rhetorical relations vary, and relations such as Specify, Background, Justify, Evidence, and Summary are examples of relation types that have been identified. These relations are also called rhetorical relations, and the terms *rhetorical* and *relational* proposition are used synonymously. Rhetorical structure theory was outlined in 1975 by Joseph Grimes, and it has been further developed in the 1980's by, eg., William Mann and Sandra Thompson.

Lexical propositions are *in the text*, ie. they are lexically and grammatically signalled, whereas relational or rhetorical propositions are not unambiguously signalled. Their comprehension hinges largely on the inferences made by readers.

I will be concerned with the question of how rhetorical relations (relational propositions) are understood by readers of texts. It might also be necessary to ask if it is justified to assume that the comprehension of relational propositions plays any role at all in text comprehension. Even if it may be agreed that their comprehension plays some role in text comprehension, it seems necessary to find out to what extent readers identify the same relations in a given text.

I will briefly report on the results of two empirical studies which seem to support two hypotheses: (1) at least in some text comprehension tasks relational propositions seem to be identified with some degree of consensus, and (2) the

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comprehension of relational propositions may figure more consciously and explicitly in some demanding text comprehension tasks such as translation.

Results of a text analysis experiment

The experiment consisted of a text analysis task administered to a group of five subjects, who were to describe the rhetorical structure of an editorial using the concepts defined in Mann and Thompson (1988).

The experiment took place at Savonlinna in the context of a seminar in which this group participated. My contribution to the seminar was a lecture on *Text and translation*, accompanied by a group-work session. My lecture was focussed on rhetorical structure theory, and I introduced the idea of text analysis in terms of relational propositions. The relation types introduced and demonstrated in some detail were *Background*, *Elaboration*, *Contrast*, *Antithesis*, *Concession*, *Evidence*, *Justify*, *Evaluation*, *Solutionhood*, and *Summary*, and those introduced only cursorily were *Condition*, *Purpose*, *Motivation*, *Enablement*, *Cause*, *Otherwise*, and *Restatement*. These relation names derive from Mann and Thompson's 1988 article. The main purpose of the group-work session was to check whether the participants had learned the system of analysis to such an extent that they could apply it to new texts.

There were two text analysis groups. They gave me permission to tape their discussions. When I listened to the tapes, it turned out that only one of the tapes was worth transcribing. There was very little talk on the other tape, and what was there was virtually inaudible. The first group's discussion, on the other hand, was lively and articulate, and therefore easy to transcribe. Thus my data originate from this "better" recording and its transcription.

The text which I had chosen for the subjects to analyze was an editorial of *The New York Times* of 30th December, 1988. The text is as follows, with sentence numbers added.

AGELESS, AND DRESSED LIKE AN ATHLETE

(1) One day this week an elderly New Yorker was seen running for a bus. (2) Running *like a deer*! (3) How come this woman was so fleet of foot? (4) Because said feet were encased in Nikes, or Adidases, or Reeboks. (5) Or something just like them. (6) Along with millions of other Americans old enough to remember Jesse Owens, she has discovered that wisdom lies in dressing like an athlete.

(7) There is an 84-year-old New Englander, for instance, whose collection of sweats rivals that of the heavyweight champion Mike Tyson. (8) She has them in pink and blue and red and gray, and she has them for all occasions.

(9) On three-dog nights, when once she might have huddled in bed dressed in a flannel nightgown, banked by the requisite trio of spaniels, she is serene in sweatshirt and pants. (10) And the ice-cube feet that used to make it through the night attired in hand-knitted booties are now toasted by sweat socks - the kind with two stripes at the top.

(11) There is nothing new, of course, in dressing practically. (12) But to dress as if you were in training is to do so without sacrificing chic and secrecy. (13) Nursie shoes, wedgies and the little numbers with the tractor-tread sole are classic solaces for the footsore. (14) But they proclaim the bunion, the callus and the cruel corn.

(15) Put on running shoes, however, and who's to know if you're going to walk to work or simply have bum feet? (16) As for sweatsuits, they do what shawls, snuggies and long johns never could: provide warmth at the same time that they project action, energy and the possibility of a five-mile jog.

(17) From toddlers to totterers, millions of Americans now know happier feet and cozier days and nights because they're dressing like competitors for the Golden Gloves. (18) May this fashion never go out of style.

The instructions given to the subjects were that they should describe the dominant rhetorical relations in the text. This group completed the task in 22 minutes.

Before looking at the results of this experiment, I will give you my own description of the dominant rhetorical relations of the text. The schematic description appears in Figure 1, in which the numbers refer to the sentence

numbers in the text. According to this analysis, the nuclear "thesis" of the text is in sentence 12, which expresses, in a nutshell, what good it does to you to "dress as if you were in training." The Background and Concession, which precede this point of the text, and the Evidence, which follows it, are satellites which substantiate this nuclear thesis.

Most of the topics that emerged in the tape-recorded discussion were related to the identification of rhetorical relations. The relation names *Summary, Evidence, Justify, Concession, Background,* and *Exemplification* were explicitly referred to.

The relation which was identified most rapidly, unambiguously, unanimously, and without hesitation was *Concession*. *Concession* appeared as a discussion topic twice. This point in the group's analysis coincides with my own analysis.

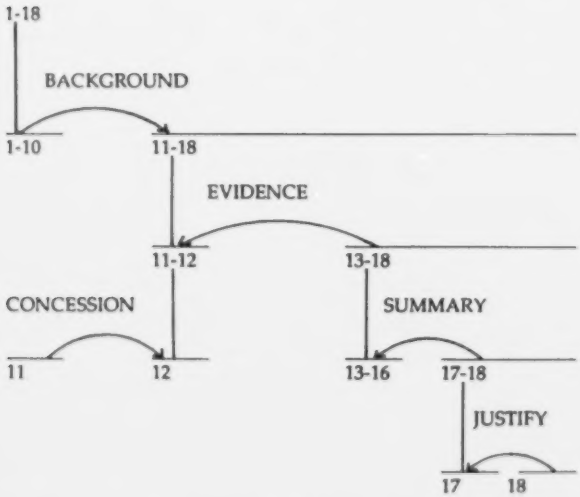

Figure 1. Schematic description of the experimental text

Another relation which appeared to be easy to identify and which did not elicit much discussion was *Summary*.

The other relations explicitly taken up in the discussion were considerably more difficult to identify. It took the group a long time to reach agreement on the dominant rhetorical structure of the text, and they ultimately approached the same kind of analysis that I presented above, according to which sentence 12 is nuclear in the entire text. The group's global analysis approached my analysis, though it took them a relatively long time to reach. The hierarchically dominant *Evidence* relation, for instance, was not particularly easy to identify. The Background relation came out as Exemplification.

Results of a translation experiment

In the translation experiment my aim was to find out on what knowledge base translators make decisions while translating. In particular, I was interested in the knowledge base of those decisions in which a translator makes a choice between two or more competing translation variants - irrespective of whether the choice is between lexical items, between alternative phrases or between alternative syntactic or textual solutions.

As data for my analysis I was able to use the results from Tuija Pöntinen's and Tiina Romanov's (1989) M.A. thesis. Pöntinen and Romanov had made think-aloud protocols of two translators' performance in translating a short LLBA abstract from English into Finnish. One subject was a professional translator and a linguist, while the other subject was an expert in psycholinguistics but a lay person in translating. The text, as shown in below, deals with lateralization of language functions in the brain.

> Danesi, Marcel, Lateralization, affect, metaphor, and language use, *Interfaces*, 1984, 11, 2, May, 41-46.
>
> While localization of many speech functions in the left hemisphere of the brain is well-documented, discourse-related and metaphorical language functions may result from interaction of left and right hemisphere functions. Research shows that emotive language programming, in both expression and elicitation, is content-controlled

> by the right hemisphere and structured by the left. Experiments also show that metaphorization, which violates constraints imposed by semantics, cannot be attributed solely to the analytical functions of the left hemisphere. Research evidence overall seems to refute the view that the right hemisphere is totally inactive in language processing.

I made an analysis of the knowledge that the subjects verbalized in their protocols. The verbalized knowledge was divided into three groups: linguistic knowledge, textual knowledge and extra-textual or world knowledge. The point of interest here is textual knowledge. It refers to knowledge which the subjects had extracted from the text, such as the professional translator's observations about the rhetorical structure of the text. The professional translator pointed out, for instance, that the text exposes an emphatic contrast between earlier research and recent research on lateralization. The following extract from her protocol (here translated from Finnish into English) shows that she makes an effort to get this contrast conveyed into the translation as well:

"now I should look at these emphases here / the first sentence begins with WHILE LOCALIZATION OF MANY MM BLAAPBLAAP / and then there is some new stuff from DISCOURSE-RELATED ETC onwards / MAY RESULT / so that it seems that this has been only *recently* subjected to research / in other words the subclause of the first sentence in fact tells us what is or should be conventional and shared knowledge to everybody in the field / so that this contrast should probably be expressed in the text / yes the text is so short / and therefore it would seem strange for instance if I started this sentence with the word "tosin" (admittedly) / there is an abundance of literature which deals with the origin of several speech functions in the left hemisphere *but* discourse-related and metaphorical language functions may *in fact* (= clitic particle -kin) arise / if only the style here were to be just a tiny bit more colloquial then the clitic particle -kin would be very good there / as a result of the interaction of the left and right hemishperes / well yes / or could I perhaps take the liberty of adding something here / but new research results show that / this may *per*haps lead the reader better into this / but recent research / lets put it this way / lets give it a try / shows that discourse-related and metaphorical language functions may in fact result from interaction of the left and right hemispheres / that's it then / the editor of the journal will then probably do what he likes to this text so that this is not necessarily the final thing"

Such verbalizations were not found in the lay subject's protocol. She seemed to deal with each sentence of the text separately and did not pay attention to connections between sentences.

Another difference in the professional's working is worth noticing in this context. She ran through the entire text nine times, the first readings being mainly characterized by efforts to understand the text thoroughly, and the last times to make sure that the final translation made sense to the reader. It is no wonder, therefore, that this translator got a very good picture also of the rhetorical structure of the text.

Conclusion

The above observations lead me to suggest that explicit concern with the comprehension of relational propositions may be characteristic of demanding text comprehension tasks such as translation, abstracting, summarizing, etc., which require an analysis of what is said in the text. More research is needed, however, to find out whether it is realistic to assume that a battery of rhetorical relations can be delineated so accurately that readers can be taught to identify them with a great degree of consensus.

I do not believe that it is possible to delineate an exhaustive battery of relations which are mutually exclusively defined. Aiming at such a battery makes an untenable assumption about the nature of language use: it assumes that language use is basically unambiguous, which it is not. It is the ambiguity and "fuzziness" inherent in language use - and the freedom of interlocutors to interpret language in ways which seem most relevant in the circumstances - that makes it impossible to create a battery of rhetorical relations which leaves no residue when applied to concrete texts.

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